



Nagman Flow-Level Systems And Solutions LLP

Conserving Tomorrow:
Measuring Flow & Level with Confidence



Nagman's Process Flow meter calibration systems are your best turn-key solution for calibrating all types of flow meters

Sizes of calibratable meters from DN-3 up to DN-600

FLOCAL Software included for easy integration and report generation

Customised & specialised systems for matching user requirements



ISO-4185



High accuracy upto 0.05%

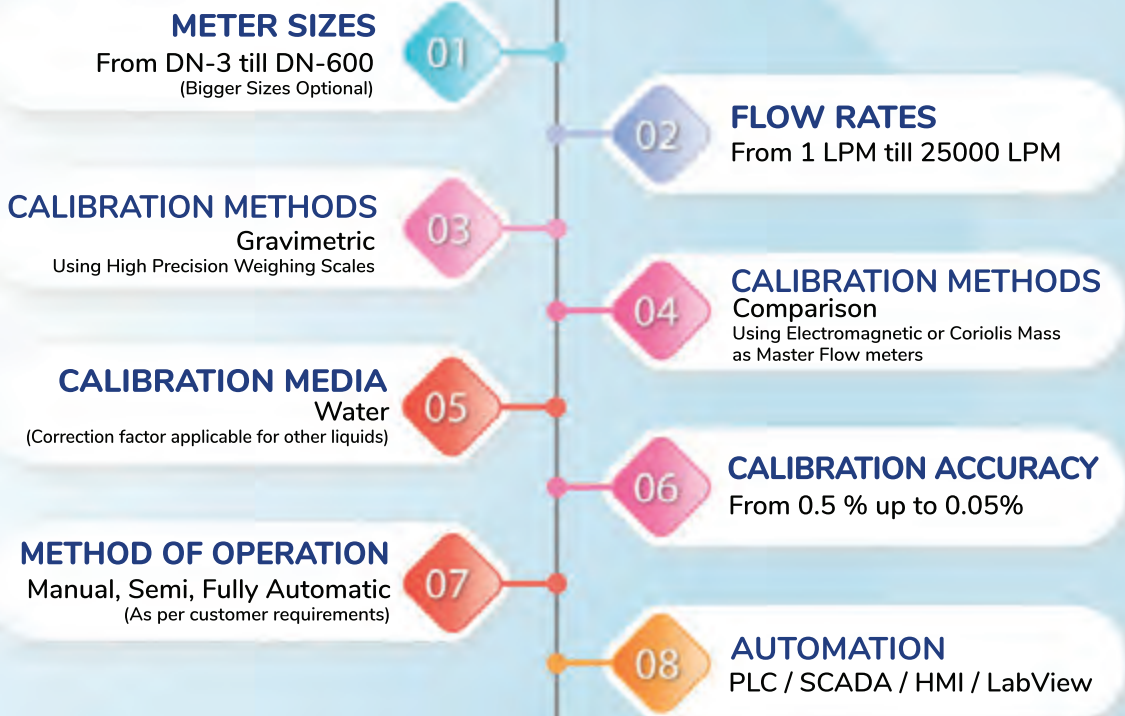


Fully Automatic Systems



SCAN FOR MORE INFORMATION

Technical Specifications



Types of Test Meters

- Electromagnetic Flow meters
- Vortex Flow Meters
- Ultrasonic Flow Meters
- Positive Displacement Flow Meters
- Mass Flow Meters

Nagman's Water meter calibration systems are your best turn-key solution for calibrating all types of domestic water meters as well as Bulk/Industrial Water meters

Meters of sizes DN-15 up to DN 300 and higher calibratable

Custom levels of system automation available including Fully Automatic systems

FLOCAL Software included for easy integration and report generation



ISO-4064



Fully Automatic Systems



High Throughput



SCAN FOR MORE INFORMATION

Technical Specifications

DOMESTIC METERS

From DN-15 till DN-50
(Up to 20 DN-15 at a time)

01

FLOW RATES

From 0.1 LPM till 25000 LPM

03

CALIBRATION ACCURACY

From 0.5 % up to 0.05%

05

AUTOMATION

PLC / SCADA / HMI / LabView

07

BULK METERS

From DN-50 till DN-300
(Bigger Sizes Optional)

02

CALIBRATION METHODS

Gravimetric
Using High Precision Weighing Scales

04

CALIBRATION METHODS

Comparison
Using Electromagnetic or Coriolis Mass
as Master Flow meters

06

METHOD OF OPERATION

Manual, Semi, Fully Automatic
(As per customer requirements)

08

Types of Test Meters

- Domestic Water Meters (DN-15 to DN-50)
- Bulk Water Meters (DN-50 to DN-300)
- Single Jet, Multi Jet, Ultrasonic, AMR, AMI, Electromagnetic & More

MOBICAL

Mobile Flow Meter Calibration System

Nagman's Mobile Flow meter calibration systems are our best portable small scale solutions for calibrating all kinds of flow meters.



Portable



Single or 3 Phase



Fully Automatic

METER SIZES

From DN-6 till DN-100

CALIBRATION ACCURACY

From 0.5 % up to 0.1 %

CALIBRATION METHODS

Comparison
Using Electromagnetic or Coriolis Mass as Master Flow meters

METHOD OF OPERATION

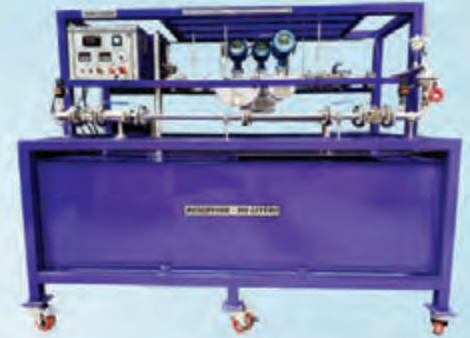
Manual, Semi, Fully Automatic
(As per customer requirements)

FLOW RATES

From 1 LPM till 2500 LPM

AUTOMATION

PLC / SCADA / HMI / LabView



LEVELCAL

Level Meter Calibration System

Nagman's Level Test Rig is designed for Primary and Interface Liquid Level Testing and Calibration. This bench is suited for Wet Calibration of both Contact / Non Contact Level Instruments



Accurate



Software Included



Fully Automatic



METER RANGES

From 1000 mm till 5000mm

CALIBRATION MEDIA

Water

MODELS

Heavy Duty Field

CALIBRATION ACCURACY

$\pm 0.05\%$ of FS
(Minimum 1mm)

METHOD OF OPERATION

Manual, Semi-Automatic and Fully Automatic

MODELS

Single/Dual Chamber Lab models

Types of Test Meters

Ultrasonic Level | Radar Level | Float type Level
Guided-wave Level | Capacitance Level

GASCAL

Gas Meter Calibration System

Nagman's Gas Meter Calibration Test Bench uses "Bell Prover" technology, which is considered as a Primary (Calibration) Standard or the "Sonic Nozzle" technology, the best Flow transfer Standard.



Sonic Nozzle



Compact or Lab Setup



Fully Automatic

METER SIZES

G 1.6 to G400

CALIBRATION ACCURACY

1% to 0.2%

CALIBRATION METHODS

Bell Prover Method, Sonic Nozzle Method

CALIBRATION MEDIA

Air (Density correction factors can be given for other gases)

FLOW RATES

0.5 m³/Hr to 10000 m³/Hr

METHOD OF OPERATION

Automatic

Types of Test Meters

Diaphragm Meter | Ultrasonic | Turbine | Coriolis Mass | Thermal Mass



SALIENT FEATURES

- Bidirectional & No moving Parts
- Supports low conductivity from 5µS/cm
- Detects Backflow & In-built Totalizer

APPLICATIONS

- Water Distribution Sewage
- Treatment & Slurry
- Cooling Water



TECHNICAL SPECIFICATIONS

SIZE DN 6 (1/4") to DN 3000 (120")	FLOW RANGE (VELOCITY) 0.5m/s to 15m/s
ACCURACY ±0.5%, ±0.3%, ±0.2%	POWER SUPPLY 220 VAC / 24V DC / 3.6V DC (Battery Operated)
MEDIUM Conductive Liquids	TYPES Integral / Remote
OUTPUT Pulse, 4-20mA, RS485 , Alarm, HART / PROFIBUS (Optional)	

SALIENT FEATURES

- High Accuracies up to 0.1%
- Measure volume and mass flow rate
- Measure all fluids including gases

APPLICATIONS

- Polymer & High viscous fluids
- Paper & Food
- Custody transfer in Petroleum & Chemical



TECHNICAL SPECIFICATIONS

SIZE DN 8 (1/3") to DN 200 (8")	SENSOR SERIES Micro-bend , U-Series, Super Micro series
ACCURACY ±0.5%, ±0.2%, ±0.1%	POWER SUPPLY 220 VAC / 24V DC
MEDIUM Liquids, Gases	TYPES Integral / Remote
OUTPUT Pulse, 4-20mA, RS485 , HART (Optional)	

Ultrasonic Flow Meter

SONICNAG

Portable

Wall Mounted

SONICNAG W

SALIENT FEATURES

- Non-Contact, Clamp-On meter
- Easy to carry Kit
- Battery lasts up to 10 hrs

APPLICATIONS

- Raw & Waste Water
- Energy Audit for Cooling Water
- Flow Meter Verification



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 6000 (240")	FLOW RANGE (VELOCITY) 0.2m/s to 20 m/s
ACCURACY ±1%	POWER SUPPLY Powered, Battery Operated
MEDIUM Homogeneous Liquids	OUTPUT RS 232
SENSORS Small DN15 100, Medium DN50 700, Large DN 300 6000	

SALIENT FEATURES

- Sensor cable up to 30m
- Low Power (1.5W)
- Continuous Monitoring and Recording

APPLICATIONS

- Energy Monitoring
- Water Conservation
- Heat Flow Measurement



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 6000 (240")	FLOW RANGE (VELOCITY) 0.2m/s to 10 m/s
ACCURACY ±1%	POWER SUPPLY 220VAC / 24VDC
MEDIUM Homogeneous Liquids	OUTPUT RS 485, SD Card , 4-20mA, Pulse, Relay
SENSORS Small DN15 100, Medium DN50 700, Large DN 300 6000	

SALIENT FEATURES

- Cost Effective & Minimal Maintenance
- Excellent repeatability with 0.05%
- High Pressure up to 400 bar

APPLICATIONS

- Distilled / Demineralized water
- Non-conductive fluids
- Fuel / Petrochemicals Custody



TECHNICAL SPECIFICATIONS

SIZE DN 4 (1/6") to DN 200 (8")	MEDIUM Liquids & Gases
ACCURACY ±0.5%, ±1%	TYPES Integral / Remote
POWER SUPPLY 24V DC / 3.6V DC (Battery Operated)	OUTPUT Pulse, 4-20mA, RS485 , HART / PROFIBUS (Optional)
TEMPERATURE Up to 180° C	

SALIENT FEATURES

- No moving Parts
- High Temperature up to 350°C
- In-built Temperature And Pressure Compensation

APPLICATIONS

- Natural Gas
- Energy Generation & Supply
- Chemicals & Pharmaceuticals



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 300 (12")	POWER SUPPLY 24V DC / 3.6V DC (Battery Operated)
ACCURACY ±1.5%, ±1%	OUTPUT Pulse, 4-20mA, RS485 , HART / PROFIBUS (Optional)
FLOW RANGE (VELOCITY) 0.5m/s to 70m/s	TYPES Integral / Remote
MEDIUM Steam, Liquids, Gas	

SALIENT FEATURES

- No Need for Temperature & Pressure Compensation
- Detects low flow of Gas (Leaks)
- Can measure both Mass & Volume flow of Gas

APPLICATIONS

- Electric Power & Water Treatment
- Petrochemical & Pharmacy
- Air separation industry



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 4000 (160")	FLOW RANGE (VELOCITY) 0.1 Nm/s to 100 Nm/s
ACCURACY ±1.0%, ±2.5%	POWER SUPPLY 220 VAC / 24V DC
MEDIUM All kinds of Gases	TYPES Integral / Remote
OUTPUT Pulse, 4-20mA, RS485 , HART (Optional)	

SALIENT FEATURES

- Low Pressure Loss
- Low Maintenance
- Detects Low Flow

APPLICATIONS

- Custody Transfer for Oil & Gas
- Marine & Shipping
- Food & Pharmaceutical



TECHNICAL SPECIFICATIONS

SIZE DN 8 (1/3") to DN 400 (16")	POWER SUPPLY 220 VAC / 24V DC / No Power
ACCURACY ±0.5%, ±0.2%, ±0.1%	OUTPUT Pulse, 4-20mA, RS485
MEDIUM Liquids	TYPES Digital / Analog
TEMPERATURE Up to 250° C	

SALIENT FEATURES

- Smart meters with Bluetooth Connectivity
- False Echo detection and removal
- Small Beam Angle under 7°

APPLICATIONS

- Cement, powder, wood & other Solid materials
- Process & Bulk Storage vessels
- Thermal & Hydroelectric power stations



LENS

TECHNICAL SPECIFICATIONS

RANGE Up to 10m / 20m / 35m / 85m / 120m	OUTPUT 4-20mA, RS485 , HART / MODBUS (Optional)
ACCURACY ±1mm , ±2mm	MEDIUM Liquids / Solids / Corrosive
POWER SUPPLY 220 VAC / 24V DC	TYPES Lens / Cone / Economical / Remote
ADDITIONAL FEATURES Bluetooth, Air Purging, False Echo Detection & Removal	

SALIENT FEATURES

- Operatable in High Pressure and Temperature
- Works with most liquids and solids
- False Echo detection and removal

APPLICATIONS

- Organic & Petrochemical Industry
- Liquid Storage & Solid powdered Silos
- Foaming/Fuming Liquids



TECHNICAL SPECIFICATIONS

RANGE Up to 30m	OUTPUT 4-20mA, RS485 , HART / MODBUS (Optional)
ACCURACY ±3mm	OPERATING CONDITIONS -200°C – 400°C ; -1 – 400 bar
POWER SUPPLY 220 VAC / 24V DC	MEDIUM Solids / Liquids / Corrosive / Low Dielectric
TYPES Rope, Rod, Dual cable, PTFE Rod , Coaxial Cable	

SALIENT FEATURES

- Economical
- Not affected by dielectric constant of mediums
- Not affected by foam/fumes

APPLICATIONS

- Petrol & Chemical
- Sewage Treatment & Slurry
- Electric Power & Food Processing



TECHNICAL SPECIFICATIONS

RANGE Up to 20m	OUTPUT 4-20mA, RS485 , HART / MODBUS (Optional)
ACCURACY ±0.25% (full range)	MEDIUM Solids / Liquids / Corrosive / Low Dielectric
POWER SUPPLY 220 VAC / 24V DC	TYPES Integral, Remote
ADDITIONAL FEATURES Open channel function, Echo Curve display	

SALIENT FEATURES

- Integrated Flow Velocity and Water Level Measurement
- Simple and convenient Installation
- Small Beam Angle & Low Power Consumption

APPLICATIONS

- Smart City & Urban Flood Control / Monitoring
- River & Stormwater flow monitoring
- Reservoir / Dam Discharge & Agriculture Irrigation



TECHNICAL SPECIFICATIONS

LEVEL RANGE Up to 45m / 85m	VELOCITY RANGE 0.05 – 20 m/s
LEVEL ACCURACY ±1mm	VELOCITY ACCURACY ± 10mm/s
POWER SUPPLY 12V / 24V DC	OUTPUT RS485, MODBUS
RADAR FREQUENCY 80GHz , 24GHz	

NEW PRODUCTS

MINI WATCAL (Q3)



A Portable & Compact system to calibrate domestic Water meters of Sizes DN-15 to DN-25

MINI GASCAL



A Portable & Compact System to calibrate domestic gas meters of sizes G1.6 to G4

PORTABLE OIL SKID (PD)



A Highly Accurate mechanical PD meter skid for measuring fuel oils without any power supply

80GHz RADAR LEVEL TRANSMITTER



A Smart and Versatile 80GHz Lens type meter with narrow beam angle and high accuracy of ± 1 mm

NAGMAN INSTRUMENTS CONSORTIUM

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